REMARKS

This is a continuation of Application Serial No. 10/097,098. Claims 1, 3 – 12, 14, and 16 – 33 are currently pending. Claims 1, 12, and 21 are the pending independent claims.

In the Final Office Action in the '098 case, the Examiner objected to Claim 16 as being of improper dependent form and suggested amendments to Claims 29 and 33.

Turning to the merits, the Examiner rejected Claims 1-4, 7-10, 12-21, 24-27, and 33 as allegedly being anticipated by U.S. Patent No. 6,193,893 to Mazzei et al (hereinafter "Mazzei"). The remaining claims, Claims 5, 6, 11, 22, 23, and 28-32 were formally objected to as depending from rejected claims but were indicated as being allowable over the prior art.

Each of the foregoing objections and rejections is respectfully traversed and favorable reconsideration is requested in view of the above amendments and following remarks.

I. Amendments to the Drawings and Specification.

In the first Office Action of August 18, 2003 in the '098 case, the Examiner raised objections to the drawings in paragraphs 1 and 2 of the Office Action. These objections were overcome in Applicants' amendment of December 17, 2003 by amending Fig. 1 in the drawings and Page 13 of the specification. These amendments to Fig. 1 and to Page 13 of the specification are repeated herein.

II. The Objections to the Dependent Claims are Overcome.

In the Final Office Action in the '098 case, Claim 16 was objected to as allegedly failing to further limit Claim 12 from which it depends. In regard to Claim 16, Applicants respectfully submit that the claim is of proper dependent form and does in fact further limit independent Claim 12. Claim 16 requires that the apparatus of Claim 12 be configured to cause at least about 80% of the VOC's to be removed from the groundwater to the vapor phase in a single pass through the stripper. This is not a mere process limitation but in fact limits the structure of the apparatus itself. Therefore, it is submitted that the objection should be withdrawn.

The Examiner also suggested amendments to Claims 29 and 33. Specifically the

Examiner suggested that Claim 29 be amended to depend from Claim 21 rather than Claim 28 "as claim 28 recites the same pressure range and would be a duplicate claim if allowed." The suggested amendment has been made herein; however, it is noted that Claim 29 requires not only a specific pressure range of compressed gas but also a specific volumetric flow ratio of compressed gas to groundwater. Therefore, the claims are not duplicative.

Finally, the Examiner suggested Claim 33 be amended to remove the language "in the manner of Claim 21". The claim is herein amended as requested.

III. The Claimed Invention Patentably Distinguishes Over the Cited References.

Turning to the merits, the Examiner rejected Claims 1, 3-4, 7-10, 12, 14, 16-21, 24-27, and 33 in the parent case as allegedly being anticipated by the Mazzei reference, while the remaining claims were indicated as being allowable over the prior art. It is respectfully submitted that these rejections are not well-taken.

As Applicants have previously attempted to explain, the claimed invention as defined in independent method Claims 1 and 21 and in independent apparatus Claim 12 relates to a method and accompanying apparatus for the treatment of groundwater, such as from a well, which is contaminated with volatile organic compounds, also known as VOC's. According to the claimed invention, the contaminated groundwater is withdrawn from well as a component of a two-phase extract having distinct vapor and liquid phases. While the liquid phase "may" include dissolved gaseous components, the vapor phase is nevertheless physically separate and undissolved. This two-phase extract is then stripped by passage through an inline stripper having a venturi-like expansion. Preferably, a compressed gas is injected into the extract during passage through the inline stripper as well.

The action of the inline stripper induces transfer of dissolved VOC's from the contaminated groundwater of the liquid phase of the two-phase extract to the separate undissolved vapor phase, thereby significantly reducing VOC levels in the final stripped groundwater.

The cited Mazzei reference does not disclose or suggest the withdrawal of contaminated groundwater from a well as a part of a two-phase extract as in the claimed invention. Nor does

Mazzei disclose or suggest the use of a two-phase extract as a feed stream into an inline stripper. Instead, Mazzei describes only the treatment of a simple, one-phase "liquid supply 10" which is stripped by feeding this stream into a "mixer injector 14". See Mazzei, Col. 4, Lines 19 - 42. It is only after a gas is injected into the liquid stream 10 at the mixer injector 14 that a two-phase mixture "may" be created.

This difference is quite significant. Whenever there is both a vapor phase and a separate liquid phase in intimate contact with one another (such as in the extraction of the contaminated groundwater in the claimed invention), stripping of relatively volatile components from the liquid phase to the vapor phase may occur. However, if only a liquid phase exists without an accompanying separate vapor phase (such as in the Mazzei liquid stream 10), then the conditions for stripping do not exist. There is nowhere for any "dissolved" gas to go.

Thus, in contrast with Mazzei, the claimed invention provides for what is, in effect, "pre-stripping" of VOC's from the groundwater prior to the stripping of VOC's at the inline stripper, with a commensurate improvement in overall stripping performance and VOC removal from the groundwater. That is, the two-phase flow up the well allows for enhanced stripping conditions favoring mass transfer of dissolved VOC's from the liquid phase to the separate vapor phase so that less VOC's need to be removed in the actual stripper unit. A significant amount of the VOC's will already have separated from the liquid phase to the separate vapor phase by the time the groundwater is acted on by the stripper. Mazzei plainly does not suggest this.

In the Final Office Action, the Examiner alleges that the extract from the well 10 in Mazzei is inherently a two-phase mixture composed of a liquid phase and, in his words, "tiny bubbles" of VOC's dispersed within the liquid. Applicants respectfully submit that the Examiner's contentions are both technically and legally in error.

Technically speaking, the notion that any "dissolved" VOC's would be dispersed in the liquid as "tiny bubbles" of gas is incorrect. As the Examiner correctly notes, any VOC's in Mazzei are dissolved in the liquid, i.e., there are in solution. However, a solution is by definition a one-phase mixture! For instance, the McGraw-Hill Dictionary of Scientific and

Technical Terms defines a solution as a "single, homogeneous liquid, solid, or gas phase that is a mixture in which the components (liquid, gas, solid, or comminations thereof) are uniformly distributed throughout the mixture."[1] Thus, to state that the liquid includes dissolved VOC's by definition precludes such VOC's from existing as a separate gas phase or as any imagined "tiny bubbles."

The distinction may be illustrated by considering a common carbonated soft drink. Soft drinks are ordinarily purchased in clear bottles which have been sealed under pressure. With these clear containers, it may easily be seen that while the sealed, pressurized beverage may include carbonation, the carbon dioxide gas is dissolved into the liquid phase, i.e., there is one phase and no tiny bubbles. However, when the container is opened and depressurization occurs, a portion of the dissolved gas begins to leave the solution and form bubbles. Only at this point is a two phase mixture created. Thus, Mazzei's system would not be expected to have two phases until possibly after the mixer where the liquid said to contain dissolved gas may be rapidly depressurized. Such a system stands in stark contrast to Applicants' system, which draws a two-phase flow from the downhole location for the multiple advantages discussed in the application.

The examiner therefore has respectfully misapprehended the technical distinction between a liquid containing a dissolved gas, on the one hand, and a two-phase system with a gas or vapor phase and a separate liquid phase, on the other hand. In the latter system, the separate liquid phase may contain some dissolved gas, but this dissolved gas would, by definition, be invisible. A pipe filled with a liquid containing a dissolved gas does not suggest a pipe containing separate liquid and gas phases. A liquid containing dissolved gas is not the same as a two-phase system of liquid and gas. The two are like night and day.

Moreover, the Examiner's contentions are legally insufficient to establish anticipation by "inherency". The notion of "tiny bubbles" originates in the mind of the Examiner, not in what is disclosed in Mazzei. The Mazzei reference only refers to a "liquid supply 10" and says nothing to suggest that the liquid includes "tiny bubbles" of gas. Thus, to use the reference as

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[1]Copies of the definitions of "solution" and "dissolve" are attached.

the basis for an anticipation rejection, the Examiner must establish that the liquid supply 10 is inherently a two-phase mixture including "tiny bubbles" of gas. To establish inherency, extrinsic evidence must be used to "make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. ... Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 169 F.3d, 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999)(emphasis added). The Examiner has produced no such extrinsic evidence in support of his inherency contentions. In fact, the Examiner has postulated a possibility which cannot reasonably be said with certainty to be "inherent." A two-phase system cannot reasonably be said to be "inherent" in a single phase (liquid) system containing a dissolved component. It is therefore submitted that no proper basis for the Examiner's inherency-based anticipation rejection has been established and that the same should therefore be withdrawn.

In light of the foregoing, favorable action is respectfully requested.

In the event this response is not timely filed, Applicants hereby petition for the appropriate extension of time and request that the fee for the extension along with any other fees which may be due with respect to this paper be charged to our **Deposit Account No. 12-2355.**

Respectfully submitted,

LUEDEKA, NEELY & GRAHAM, P.C.

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Enclosure:
Copy of Scientific Dictionary Excerpts

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P.O. Box 1871

Application No.
July 13, 2004
Preliminary Amendment

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on July 13, 2004
Date

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Fourth Edition

by dissociation of the molecule in which the resulting atoms carry off the excess energy. { dəˌsō·shəd·iv ˌrē·käm·bə'nā·shən }

dissogeny [ZOO] Having two sexually mature stages, larva and adult, in the life of an individual. { də'säj·ə·nē }

dissolution [CHEM] Dissolving of a material. { ˌdis·ə'lü·shən }

dissolve [CHEM] **1.** To cause to disperse. **2.** To cause to pass into solution. [GRAPHICS] A superimposing of one television or motion picture shot upon another, the emergent shot gradually brightening and the overlapped shot gradually darkening, so that as one scene disappears, another gradually appears. Also known as lap dissolve. { də'zälv }

dissolved air flotation [CHEM ENG] A liquid-solid separation process wherein the main mechanism of suspended-solids removal is the change of apparent specific gravity of those suspended solids in relation to that of the suspending liquid by the attachment of small gas bubbles formed by the release of dissolved gas to the solids. Also known as air flotation. { də'zälvd ˌer flō'tā·shən }

dissolved gas *See* solution gas. { də'zälvd 'gas }

dissolved-gas drive *See* internal gas drive. { də'zälvd ˌgas 'drīv }

dissolved-gas-drive reservoir [PETRO ENG] Oil reservoir in which the temperature of the liquid phase is below critical, and the liquid is driven from the reservoir by the expansion of dissolved gas. Also known as a bubble-point reservoir. { də'zälvd ˌgas ˌdrīv 'rez·əv,wär }

dissolved-gas reservoir *See* solution-gas reservoir. { də'zälvd ˌgas 'rez·əv,wär }

dissonance [ACOUS] An unpleasant combination of harmonics heard when certain musical tones are played simultaneously. Also known as discord. { 'dis·ə·nəns }

dissymmetrical network *See* dissymmetrical transducer. { ˌdis·ə'me·trə·kəl 'net,wərk }

dissymmetrical transducer [ELECTR] A transducer whose input and output image impedances are not equal. Also known as dissymmetrical network. { ˌdis·ə'me·trə·kəl tranz'dü·sər }

dissymmetry [SCI TECH] Lack of symmetry. { di'sim·ə·trē }

dissymmetry coefficient [ANALY CHEM] Ratio of the intensities of scattered light at 45 and 135°, used to correct for destructive interference encountered in light-scattering–photometric analyses of liquid samples. { di'sim·ə·trē ˌkō·i'fish·ənt }

dissymmetry factor [OPTICS] A quantity which expresses the strength of circular dichroism, equal to the difference in the absorption indices for left and right circularly polarized light divided by the absorption index for ordinary light of the same wavelength. Also known as anisotropy factor. { di'sim·ə·trē ˌfak·tər }

Distacodidae [PALEON] A family of conodonts in the suborder Conodontiformes characterized as simple curved cones with deeply excavated attachment scars. { dis·tə'käd·əˌdē }

distal [BIOL] Located away from the point of origin or attachment. { 'dist·əl }

distal convoluted tubule [ANAT] The portion of the nephron in the vertebrate kidney lying between the loop of Henle and the collecting tubules. { 'dist·əl ˌkän·və'lüd·əd 'tü·byül }

distance [MATH] A nonnegative number associated with pairs of geometric objects. [MECH] The spatial separation of two points, measured by the length of a hypothetical line joining them. { 'dis·təns }

distance finding station [NAV] A radio beacon equipped with a synchronized sound signal to provide the pilot or marine with a means of determining distance from the source of the sound, by measuring the difference in the time of reception of the two signals; the sound may be transmitted through air or water and from the same location as the radio signal or a location remote from it. { 'dis·təns ˌfīnd·iŋ ˌstā·shən }

distance-luminosity relation [ASTRON] The relation in which the light intensity from a star is inversely proportional to the square of its distance. { ˌdis·təns lü·mə'näs·əd·ē ri'lā·shən }

distance mark [ELECTR] A movable point produced on a radar display by a special signal generator, so that when the mark is moved to a target position on the screen the range to the target can be read on the calibrated dial of the signal generator; usually used for gun laying where highly accurate distance is important. { 'dis·təns ˌmärk }

distance marker [ENG] One of a series of concentric circles, painted or otherwise fixed on the screen of a plan position indicator, from which the distance of a target from the radar antenna can be read directly; used for surveillance and navigation where the relative distances between a number of targets are required simultaneously. Also known as radar range marker; range marker. { 'dis·təns ˌmärk·ər }

distance marking light [NAV] An approach light indicating distance from the end of a runway, landing strip, or channel. { 'dis·təns ˌmärk·iŋ ˌlīt }

distance-measuring equipment [NAV] A radio aid to navigation that provides distance information by measuring total round-trip time of transmission from an airborne interrogator to a ground-based transponder and return. Abbreviated DME. { 'dis·təns ˌmezh·ər·iŋ i'kwip·mənt }

distance modulus *See* modulus of distance. { 'dis·təns ˌmäj·ə·ləs }

distance protection [ELEC] Effect of a device operative within a predetermined electrical distance on the protected circuit to cause and maintain an interruption of power in a faulty circuit. { 'dis·təns prəˌtek·shən }

distance ratio [MECH ENG] The ratio of the distance moved by the effort or input of a machine in a specified time to the distance moved by the load or output. { 'dis·təns ˌrā·shō }

distance reception [COMMUN] Reception of messages from, or communication with, distant radio stations. Abbreviated DX. { 'dis·təns ri'sep·shən }

distance relay [ELEC] Protective relay, the operation of which is a function of the distance between the relay and the point of fault. { 'dis·təns ˌrē,lā }

distance resolution [ENG] The minimum radial distance by which targets must be separated to be separately distinguishable by a particular radar. Also known as range discrimination; range resolution. { 'dis·təns ˌrez·ə,lü·shən }

distance/velocity lag [CONT SYS] The delay caused by the amount of time required to transport material or propagate a signal or condition from one point to another. Also known as transportation lag; transport lag. { ˈdis·təns və'läs·əd·ē ˌlag }

distant early warning line [ORD] Defense line of radar stations at about the 70th parallel on the North American continent. { 'dis·tənt ˌər·lē 'wȯrn·iŋ ˌlīn }

distant field [ELECTROMAG] The electromagnetic field at a distance of five wavelengths or more from a transmitter, where the radial electric field becomes negligible. { ˈdis·tənt ˈfēld }

distant signal [CIV ENG] A signal placed at a distance from a block of track to give advance warning when the block is closed. { ˈdis·tənt 'sig·nəl }

distemper [VET MED] Any of several contagious virus diseases of mammals, especially the form occurring in dogs, marked by fever, respiratory inflammation, and destruction of myelinated nerve tissue. { dis'tem·pər }

disthene *See* kyanite. { 'dis,thēn }

distichous [BIOL] Occurring in two vertical rows. { 'dis·tə·kəs }

distillate [CHEM] The products of distillation formed by condensing vapors. { 'dis·tə,lāt }

distillate fuel [MATER] Any one of the wide variety of fuels obtained from fractions boiling above the temperature at which gasoline comes off in the distillation of petroleum. { 'dis·tə,lāt ˌfyül }

distillate fuel oil [MATER] A classification for one of the overhead fractions produced from crude oil in conventional distillation operations. { 'dis·tə,lāt 'fyül ˌȯil }

distillation [CHEM] The process of producing a gas or vapor from a liquid by heating the liquid in a vessel and collecting and condensing the vapors into liquids. { ˌdis·tə'lā·shən }

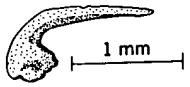
distillation column [CHEM] A still for fractional distillation. { ˌdis·tə'lā·shən ˌkäl·əm }

distillation curve [CHEM] The graphical plot of temperature versus overhead product (distillate) volume or weight for a distillation operation. { ˌdis·tə'lā·shən ˌkərv }

distillation loss [CHEM] In a laboratory distillation, the difference between the volume of liquid introduced into the distilling flask and the sum of the residue and condensate received. { ˌdis·tə'lā·shən ˌlȯs }

distillation range [CHEM] The difference between the tem-

DISTACODIDAE



Multioistodus, a typical conodont of the family Distacodidae. *(After illustration in R. R. Shrock and W. H. Twenhofel, Principles of Invertebrate Paleontology, McGraw-Hill, 2d ed., 1953)*

solubility product constant [PHYS CHEM] A type of simplified equilibrium constant, K_{sp}, defined for and useful for equilibria between solids and their respective ions in solution; for example, the equilibrium

$$AgCl(s) \rightleftarrows Ag^+ + Cl^-,\ [Ag^+][Cl^-] \cong K_{sp}$$

where $[Ag^+]$ and $[Cl^-]$ are molar concentrations of silver ions and chloride ions. { ˌsäl·yə'bil·əd·ē ˈpräd·əkt ˌkän·stənt }

solubility test [ANALY CHEM] **1.** A test for the degree of solubility of asphalts and other bituminous materials in solvents, such as carbon tetrachloride, carbon disulfide, or petroleum ether. **2.** Any test made to show the solubility of one material in another (such as liquid-liquid, solid-liquid, gas-liquid, or solid-solid). { ˌsäl·yə'bil·əd·ē ˌtest }

soluble [CHEM] Capable of being dissolved. { 'säl·yə·bəl }

soluble barbital *See* sodium barbital. { 'säl·yə·bəl 'bär·bəˌtal }

soluble castor oil *See* Turkey red oil. { 'säl·yə·bəl 'kas·tər ˌȯil }

soluble cutting oil [MATER] A petroleum oil containing an emulsifying agent to make it mix easily with water; used as a coolant for metal-cutting tools. { 'säl·yə·bəl 'kəd·iŋ ˌȯil }

soluble glass *See* sodium silicate. { 'säl·yə·bəl 'glas }

soluble guncotton *See* pyroxylin. { 'säl·yə·bəl 'gənˌkat·ən }

soluble indigo blue *See* indigo carmine. { 'säl·yə·bəl 'in·dəˌgō 'blü }

soluble nitrocellulose *See* pyroxylin. { 'säl·yə·bəl ˌnī·trō 'sel·yəˌlōs }

soluble oil [MATER] An oil that readily forms a stable emulsion or colloidal suspension in water. Also known as emulsifying oil. { 'säl·yə·bəl 'ȯil }

soluble starch [MATER] A group of water-soluble polymers formed from starch, such as the starches derived from corn or potato, by acetylation, acid hydrolysis, chlorination, or by action of enzymes to form starch acetates, ethers, and esters; used as textile sizing agents, emulsifying agents, and paper coatings. { 'säl·yə·bəl 'stärch }

solum [GEOL] The upper part of a soil profile, composed of A and B horizons in mature soil. Also known as true soil. { 'sō·ləm }

solute [CHEM] The substance dissolved in a solvent. { 'säl·ˌyüt }

solute compartmentation [BOT] The sequestering of a plant cell's salt in a vacuole so that the salt does not poison the cell. { 'säl·yüt kəmˌpärt·mən'tā·shən }

solution [CHEM] A single, homogeneous liquid, solid, or gas phase that is a mixture in which the components (liquid, gas, solid, or combinations thereof) are uniformly distributed throughout the mixture. { sə'lü·shən }

solution ceramic [ELEC] A nonbrittle, inorganic ceramic insulating coating that can be applied to wires at a low temperature; examples include ceria, chromia, titania, and zirconia. { sə'lü·shən sə'ram·ik }

solution dyeing [TEXT] Adding dye to the chemical compound in the spinneret before extrusion. Also known as dope dyeing. { sə'lü·shən ˌdī·iŋ }

solution gas [PETRO ENG] Gaseous reservoir hydrocarbons dissolved in liquid reservoir hydrocarbons because of the prevailing pressures in the reservoir. Also known as dissolved gas. { sə'lü·shən ˌgas }

solution gas drive *See* internal gas drive. { sə'lü·shən ˈgas ˌdrīv }

solution-gas reservoir [PETRO ENG] Oil reservoir initially at or above the bubble-point pressure of the gas-oil mixture, and produced primarily by the expansion of the oil and its dissolved gas. Also known as dissolved-gas reservoir. { sə'lü·shən ˈgas 'rez·əvˌwär }

solution groove [GEOL] One of a series of continuous, subparallel furrows developed on an inclined or vertical surface of soluble and homogeneous rock (such as the limestone walls of a cave) by the slow corroding action of trickling water. { sə'lü·shən ˌgrüv }

solution heat treatment [MET] Heating and holding an alloy at a temperature at which one (or more) constituent enters into solid solution, then cooling the alloy rapidly to prevent the constituent from precipitating. { sə'lü·shən 'hēt ˌtrēt·mənt }

solution mining [MIN ENG] The extraction of soluble minerals from subsurface strata by injection of fluids, and the controlled removal of mineral-laden solutions. { sə'lü·shən ˌmīn·iŋ }

solution poison [NUCLEO] A soluble nuclear poison, such as boric acid, added to the coolant of a nuclear reactor for purposes of reactivity control; generally used only during shutdown periods, and chemically removed from the coolant prior to resuming operation. { sə'lü·shən ˌpȯiz·ən }

solution pool [GEOL] A pool in a rock that is formed by the dissolution of the rock in ocean water. { sə'lü·shən ˌpül }

solution porosity [PETRO ENG] A generic designation for reservoir-rock porosity created by solution action; some examples are crystalline limestone and dolomite, porous cap rock, and honeycombed anhydrite. { sə'lü·shən pəˌräs·əd·ē }

solution potholes [GEOL] Potholes produced in carbonate rocks by dissolution. { sə'lü·shən ˌpätˌhōlz }

solution pressure [PHYS CHEM] **1.** A measure of the tendency of molecules or atoms to cross a bounding surface between phases and to enter into a solution. **2.** A measure of the tendency of hydrogen, metals, and certain nonmetals to pass into solution as ions. { sə'lü·shən ˌpresh·ər }

solution process [CHEM ENG] An oil-refining process for separating mercaptans from gasoline by washing with a caustic solution containing organic compounds in which the mercaptans are soluble. { sə'lü·shən ˌprä·səs }

solution transfer [GEOL] A process whereby pressure solution of detrital mineral grains at contact areas is followed by recrystallization on the less strained parts of the grain surfaces. { sə'lü·shən ˌtranz·fər }

solutizer-air regenerative process [CHEM ENG] A petroleum refinery process that is identical to the solutizer-steam regeneration process, except for the regeneration step; the newer units use uncatalyzed air regeneration. { sə'lüˌtīz·ər 'er rē'jen·ə·rəd·iv ˌprä·səs }

solutizer-steam regenerative process [CHEM ENG] A petroleum refinery process used to extract mercaptans from gasoline or naphtha; uses solutizers (potassium isobutyrate or potassium alkyl phenolate) in strong potassium hydroxide solution as the selective solvent. { sə'lüˌtīz·ər 'stēm rē'jen·ə·rəd·iv ˌprä·səs }

solutizer-tannin process [CHEM ENG] A petroleum refinery process that is an early variation of the solutizer-air regenerative process for extraction of mercaptans from gasoline; uses tannin-catalyzed oxidation for the regeneration step. { sə'lüˌtīz·ər 'tan·ən ˌprä·səs }

solutrope [CHEM] A ternary mixture with two liquid phases and a third component distributed between the phases, or selectively dissolved in one or the other of the phases; analogous to an azeotrope. { 'säl·yəˌtrōp }

solvable group [MATH] A group G which has subgroups $G_0, G_1, \ldots, G_n$, where $G_0 = G$, G_n = the identity element alone, and each G_i is a normal subgroup of G_{i-1} with the quotient group G_{i-1}/G_i Abelian. { 'säl·və·bəl 'grüp }

solvation [CHEM] The process of swelling, gelling, or dissolving of a material by a solvent; for resins, the solvent can be a plasticizer. { säl'vā·shən }

Solvay process [CHEM ENG] The process to make sodium carbonate and calcium chloride by treating sodium chloride with ammonia and carbon dioxide. { 'säl,vā ˌprä·səs }

solvent [CHEM] That part of a solution that is present in the largest amount, or the compound that is normally liquid in the pure state (as for solutions of solids or gases in liquids). { 'säl·vənt }

solvent deasphalting [CHEM ENG] A petroleum refinery process used to remove asphaltic and resinous materials from reduced crude oils, lubricating oil stocks, gas oils, or middle distillates through the extractive or precipitant action of solvents. Also known as solvent deresining. { 'säl·vənt dē'as,fôlt·iŋ }

solvent deresining *See* solvent deasphalting. { 'säl·vənt diˌrez·ən·iŋ }

solvent dewaxing [CHEM ENG] A petroleum refinery process for solvent removal of wax from oils; the mixture of waxy oil and solvent is chilled, then filtered or centrifuged to remove the precipitated oil; the solvent is recovered for reuse. { 'säl·vənt diˌwaks·iŋ }

solvent dyeing [TEXT] The dyeing of synthetic textiles by using chlorinated hydrocarbon solvents (such as trichloroethy-